



Unbundling for FTTH and FTTC networks

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Unbundling for FTTH and FTTC

Key Issues

- **Proposed rule, section 51.219(a)(3)**

- (3) ~~Fiber-to-the-Home~~ loops. A ~~fiber-to-the-home~~ loop is a local loop consisting entirely of fiber optic cable, whether dark or lit, and serving a **terminal, at, or within 500 feet of, an** end user's customer premises.

- **"Bright Line"**

- "Bright Line" is preserved in FTTC and/or FTTH
- Same demarc location for both architectures
- Same CPE interfaces for both architectures
- Only difference is how much distance, up to 500 feet, exists between O/E conversion and demarc
- Loop administration and inventory tools can readily identify loop types

- **Service Parity**

- Capacity of the fiber medium is essentially limitless
- Some amount of metallic medium used in both FTTH and FTTC
- Bandwidth delivery is practically the same for both architectures; FTTC can support >5Gb/s (Coax) and 150Mb/s (Twisted Pair) over 500 feet, as even the Association for Local Telecommunications Services (ALTS) acknowledges in its FCC ex-parte submission, Jan 23, 2004

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- **Competitive Impairment**

- Standard is met with both architectures

- **FTTPremise definition**

- Includes Fiber-to-the-Home (FTTH) and Fiber-to-the-Curb (FTTC)

- **Multi-Dwelling Unit (MDU) / Multi-Tenant Unit (MTU) solution**

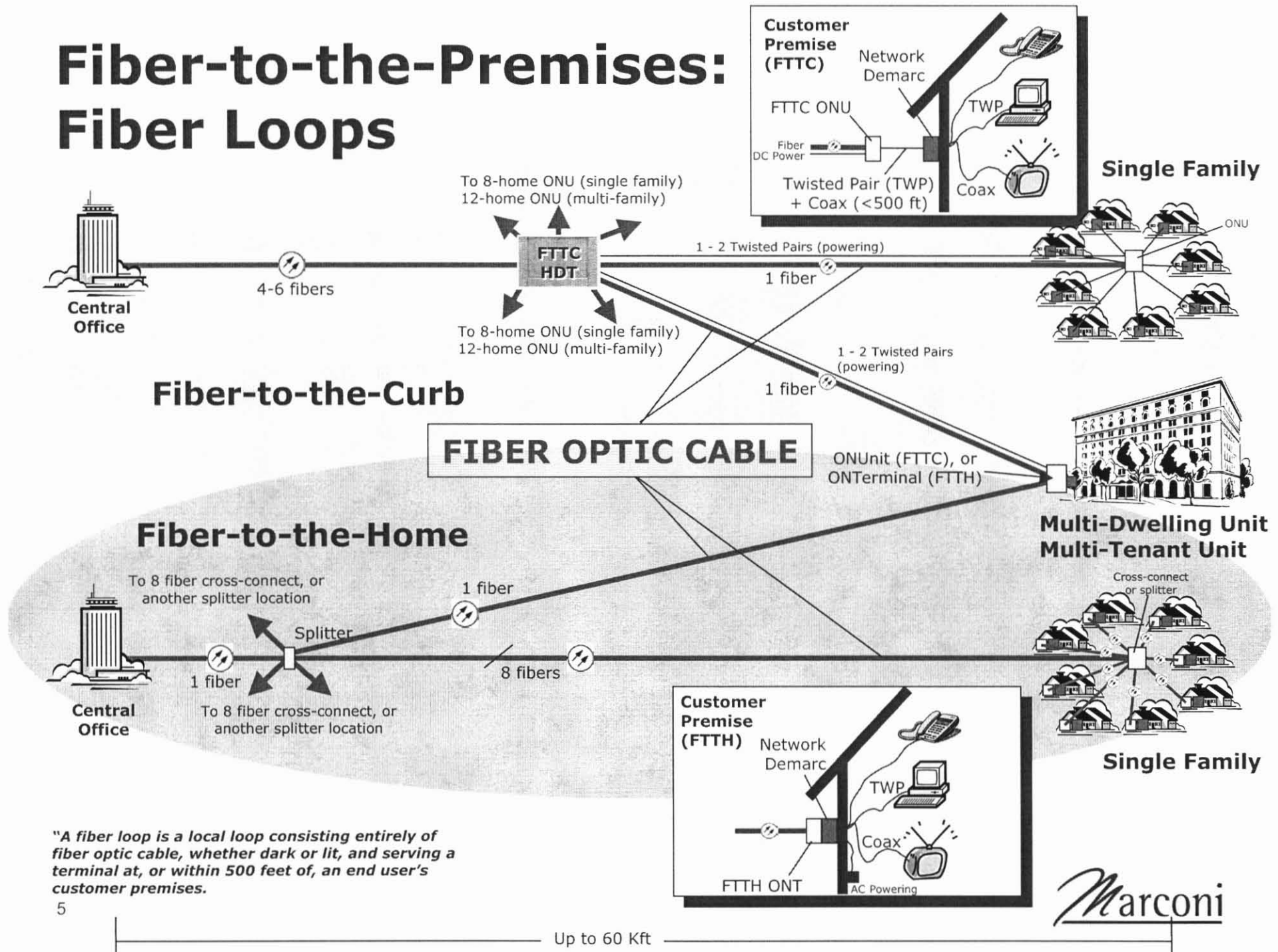
- Represent significant percentage of customers
- FTTC and FTTH MDU applications are identical; ONT location is same as ONU location; service provider frequently doesn't own intra-building wiring

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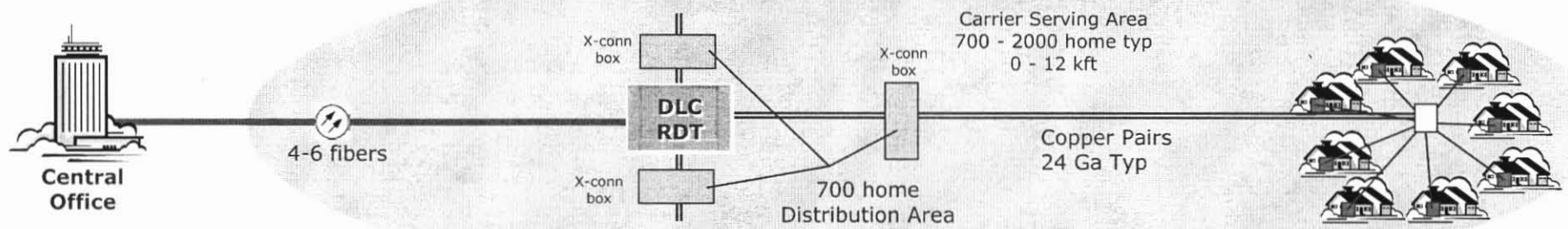
- **Network Engineering Differences (FTTC vs. FTTH)**
 - **Powering**
 - Network powering vs. home powering
 - Centralized battery backup vs. distributed batteries
 - Service provider ownership and management vs. customer owned and managed
 - **Bandwidth Sharing**
 - One fiber shared by 8 - 12 homes vs. one fiber shared by 32 homes
 - **Electronic Points of Failure**
 - O/E and powering conversion shared by 8-12 users vs. O/E, powering dedicated, and replicated, for every user

Fiber-to-the-Premises: Fiber Loops

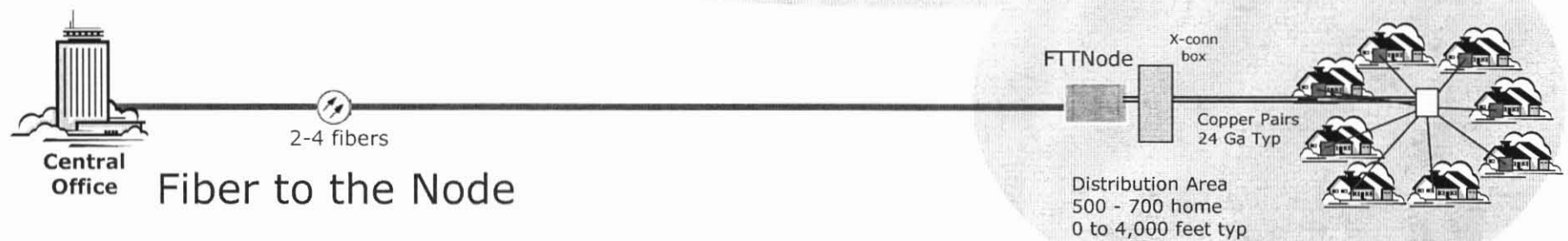


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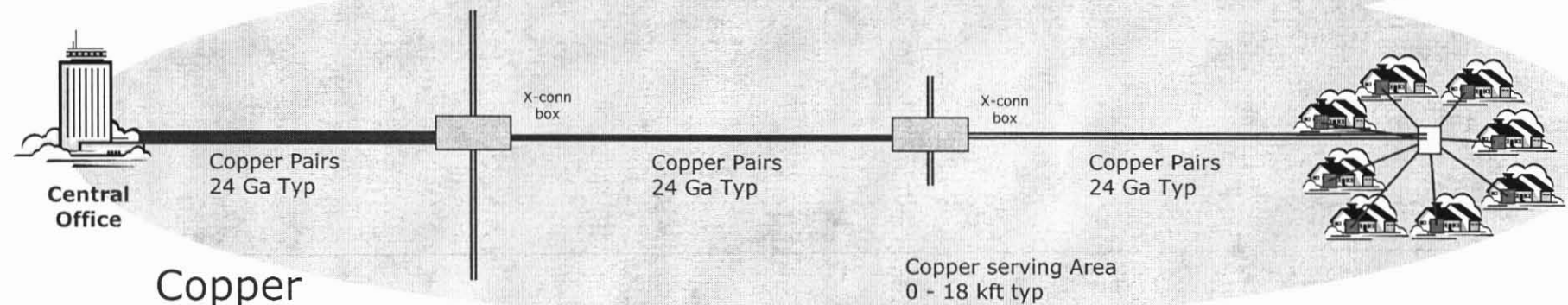
Other Hybrid Loops



Digital Loop Carrier



Fiber to the Node



Copper